

Work Order ID 65287

January 11, 2011 9:10:36 AM



Page 1

Item ID: D206-642-541

Accept



Setup Start



Revision ID:

Stop



Item Name: Replacement Skidtube

Start Date: 1/11/11 Start Qty: 1.00



Cust Item ID:

Required Date: 1/28/11 Req'd Qty: 1.00



Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

Draw Nbr

Revision Nbr

D3274

D

IIN-D206-642

Rev M

100

0.00



DOCUMENT CONTROL

DC

0.00

Memo

Document Control

Photocopy bluefile & type labels per PPP D206-642-541

CHG003

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 65287

January 11, 2011 9:10:36 AM



Page 2

Item ID: D206-642-541

Accept



Setup Start



Revision ID:

Stop



Item Name: Replacement Skidtube

Start Date: 1/11/11 Start Qty: 1.00



Cust Item ID:

Required Date: 1/28/11 Req'd Qty: 1.00



Customer:

Reference:

Run Start



Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

110

0.00



Skidtubes

Skidtubes

0.00

Skidtubes

Memo

****VERIFY AND INSPECT THE MATERIAL PRIOR TO USE****

1- Bend FWD end of tube using bend prog D3274 FWD and foil 10 as per dwg D3274, cut fwd end of tube with saw table setup D3274.

BE 11/01/13

2- remove fwd indexing ridge as per dwg D3274. Prepare for welding

BE 11/01/18

3- weld fwd cap as per dwg D3274 and OSI004

AR Aluminum Rod Batch: M116577

M116577

BE 11/01/19

4- grind fwd cap weld on top surface only

BE 11/01/19

5- Cut AFT end of tube at 170.9" as per dwg D3274 and deburr end.

6-Drill Aft cap pilot hole using DT8025

7 -Cleco DT8025 in position and install pilot hole drill Jig DT8742A,B,C,D.
Drill 3/16" pilot holes as per Dwg D3274

BE 11/01/20

8 -Remove inner indexing ridge on aft end of skidtube as per Dwg D3274 scribe batch #

9 -Open aft end cap holes to Ø0.208" as per Dwg D3274. Deburr aft end.

W/O:		WORK ORDER CHANGES					
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NOTE: Date & initial all entries

Work Order ID 65287

January 11, 2011 9:10:41 AM



Page 3

Item ID: D206-642-541

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Setup Start



Revision ID:

Stop



Item Name: Replacement Skidtube

Start Date: 1/11/11 Start Qty: 1.00



Cust Item ID:

Required Date: 1/28/11 Req'd Qty: 1.00



Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
114 QC Quality Control	QC5- Inspect part completeness to step on W/O Memo	0.00 0.00							
116 QC Quality Control	QC10- Inspect visual per QSI004- ground welds Memo	0.00 0.00							
120 HandFinish Hand Finishing	Chemical Conversion Coat per QSI005 4.1 Memo	0.00 0.00							

8/10/12/1

8/10/12/1

(X)

1 - 10 BE 11/01/24

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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NOTE: Date & initial all entries

Work Order ID 65287

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January 11, 2011 9:10:41 AM

Item ID: D206-642-541

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Setup Start



Revision ID:

Stop



Item Name: Replacement Skidtube

Start Date: 1/11/11 Start Qty: 1.00



Cust Item ID:

Required Date: 1/28/11 Req'd Qty: 1.00



Customer:

Reference:

Run Start



Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

130

QC3- Inspect Part Finish

0.00



QC

Memo

0.00

Quality Control

11-1-24

150

Skidtubes

0.00



Skidtubes

Memo

0.00

Skidtubes

1-Open Ø0.313" and 0.375" crossbolt spacer holes as per Dwg D3274

2-Deburr crossbolt spacer holes as per Dwg D3274 and blow out chips from inside the tube

3-Bond web in place as per Dwg D3274 & QSI 015.

A/R ☐ Sikaflex-291 ☒ 11/6040 ☐Sikaflex expire date: 11-09-30 ☐Start: 11-01-24 ☐ Time: 12:30 ☐Finish: 11-11-25 ☐ Time: 8:25 AM ☐

(Adhere for 12 hours)

3 BE 11/01/24

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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NOTE: Date & initial all entries

Work Order ID 65287

January 11, 2011 9:10:46 AM



Page 5

Item ID: D206-642-541

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Setup Start



Revision ID:

Stop



Item Name: Replacement Skidtube

Start Date: 1/11/11 Start Qty: 1.00



Cust Item ID:

Required Date: 1/28/11 Req'd Qty: 1.00



Customer:

Reference:

Run Start



Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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160



QC

Quality Control

QC5- Inspect part completeness to step on W/O

0.00

Sulol/25

Memo

0.00



170



Skidtubes

Skidtubes

Skidtubes

0.00

0.00

Memo

1-Bend AFT end of tube using bend prog. D3274 AFT as per dwg D3274. Install drop pins in crossbolt spacer holes to maintain web position.

2- DRILL PILOT HOLES FOR WEARPLATES USING D3274-1T2
OPEN HOLES TO .297" Deburr3-DRILL TOE PIN HOLE .640" DIA AS PER DWG USING DT8935 FWD
END OF TUBE
DEBURR INSIDE OF HOLE AS NECESSARY (DO NOT ENLARGE HOLES)
REMOVE ANY FOREIGN OBJECTS INSIDE OF TUBES

4- Countersink crossbolt spacer holes as per Dwg D3274

5- prepare for welding

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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NOTE: Date & initial all entries

Work Order ID 65287

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Page 6

Item ID: D206-642-541

Accept



Setup Start



Revision ID:

Stop



Item Name: Replacement Skidtube

Start Date: 1/11/11 Start Qty: 1.00



Cust Item ID:

Required Date: 1/28/11 Req'd Qty: 1.00



Customer:

Reference:

Run Start



Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
180	QC5- Inspect part completeness to step on W/O	0.00 4.5°							
		3.0 BEND				1	0		BER 1/11/26
QC	Memo	0.00							

Quality Control

190		0.00							
	Skidtubes								
Skidtubes	Memo	0.00							
Skidtubes	1-Insert D2649 & D3275-1 crossbolt spacers. Weld as per QSI 004 and Dwg D3274. Remember to back drill each hole before welding the other side. Use aluminum rod A/R <input type="checkbox"/> Aluminum Rod <input checked="" type="checkbox"/> mill 385								BE 1/11/26
	3-Grind cross bolt welds flush as per Dwg D3274.								
	4-Counterbore 5/16" x 0.750" deep as per Dwg D3274 and deburr.								

BE 1/11/26

> DP

11-1-27

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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NOTE: Date & initial all entries

Work Order ID 65287

January 11, 2011 9:10:52 AM



Page 7

Item ID: D206-642-541

Accept



Setup Start



Revision ID:

Stop



Item Name: Replacement Skidtube

Start Date: 1/11/11 Start Qty: 1.00



Cust Item ID:

Required Date: 1/28/11 Req'd Qty: 1.00



Customer:

Reference:

Run Start



Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

200

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

Quality Control

Sublot 27

210

QC10- Inspect visual per QSI004- ground welds

0.00



QC

Memo

0.00

Quality Control

Sublot 27

(X)

220

Pressure Wash per QSI005 4.3

0.00



HandFinish

Memo

0.00

Hand Finishing

Re-alodine tube as per QSI 005 section 4.1.2.1 do not acid etch

=> 11/01/31 T

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

January 11, 2011 9:10:52 AM

Accept

Setup Start

Stop

Cust Item ID:

Customer:

Reference:

Run Start

Stop

**Insp.
Stamp**

0.00

m 15951.

Memo

START TIME: 7:00
OVEN TEMPERATURE: 320°
FINISH TIME: 10:00

0.00

0.00

Memo

0.00

Quality Control

0.00

Memo

0.00

Hand Finishing

1-Install Nut Plate as per Dwg D3274. Apply LPS-3 to Nut Plate and rivets.

✓A/R□N/A□LPS-3□ M109956

2-Install inserts as per Dwg D3274. Use a drop of Sikaflex inside insert holes a

A/R ☐ Sikaflex-291 ☐ 11/15/14 ☐

Sikaflex expire date: 11/01

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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NOTE: Date & initial all entries

Work Order ID 65287

January 11, 2011 9:10:58 AM



Page 9

Item ID: D206-642-541

Accept



Setup Start



Revision ID:

Stop



Item Name: Replacement Skidtube

Start Date: 1/11/11 Start Qty: 1.00



Cust Item ID:

Required Date: 1/28/11 Req'd Qty: 1.00

Customer:

Reference:

Run Start



Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

260

QC5- Inspect part completeness to step on W/O

0.00

Subtotal

70

QC

Memo

0.00

Quality Control

Inspect Nut Plate & Inserts

270

HAND FINISHING RESOURCE #1

0.00

=> H

11/02/01

1/0

HandFinish

Memo

0.00

Hand Finishing

1-Install wearpads & gaskets as per Dwg D3274.

2-Install ring as per Dwg D3274

A/R ☐ Sikaflex-291 ☐ 11/14/11

Sikaflex expire date: ☐ 11/01

3-Inspect for foreign objects as per QSI 024

4-Spray inside of tube on both sides of web with LPS-3

A/R LPS-3 Batch: 11/14

5-Install Aft Cap and seal with Sikaflex. Clean excess adhesive.

A/R ☐ Sikaflex-291 ☐ 11/15/11

Sikaflex expire date: ☐ 11/01

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 65287

January 11, 2011 9:11:03 AM



Page 10

Item ID: D206-642-541

Accept



Setup Start



Revision ID:

Stop



Item Name: Replacement Skidtube

Start Date: 1/11/11 Start Qty: 1.00



Cust Item ID:

Required Date: 1/28/11 Req'd Qty: 1.00



Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

280

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

Subtotal



Quality Control

290

Identify as per dwg & Stock Location: PIP

0.00



Packaging

Memo

65751

0.00

Cuppo

Packaging

300

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

11/02/10
MF 11-02-10

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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NOTE: Date & initial all entries

Picklist Print

January 11, 2011 9:10:24 AM

Page 1

Work Order ID: 65287

Parent Item: D206-642-541

Parent Item Name: Replacement Skidtube

Start Date: 1/11/11




Required Date: 1/28/11

Start Qty: 1.00

Required Qty: 1.00

Comments:

IPP Rev:B 05-09-23 Revised per D206-642 Rev. J KJ/JLM
 IPP Rev:C 07-02-23 Added SS Wearplates & Gaskets JLM
 IPP Rev:D 07-12-06 replace NAS1515H3L to D3672-1 DD
 IPP Rev:E 08-04-17 as per PAR 08-015 DD verified by:EC
 IPP Rev:F 08-06-02 add comment DD verified by:EC
 IPP Rev:G 08-10-09 revise details DD verified by:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D2600-1-190  Extrusion Round 3" 206		Manufactured	No			110	Each	52.0000	1	1		BE 11/01/13	
<div> <div>Location</div> <div>Loc Qty</div> <div>Loc Code</div> </div>													
<div> <div>LG</div> <div>52</div> <div></div> </div>													
<div> <div>47575</div> <div>4</div> <div></div> </div>													
<div> <div>59874</div> <div>48</div> <div></div> </div>													
D3285-1  Cap		Manufactured	No			110	Each	122.0000	1	1		BE 11/01/19	
<div> <div>Location</div> <div>Loc Qty</div> <div>Loc Code</div> </div>													
<div> <div>LG</div> <div>122</div> <div></div> </div>													
<div> <div>52511</div> <div>74</div> <div></div> </div>													
<div> <div>52647</div> <div>48</div> <div></div> </div>													
D3282-041  Float Web (206L/407)		Manufactured	No			150	Each	1.0000	1	1		BE 11/01/24	
<div> <div>Location</div> <div>Loc Qty</div> <div>Loc Code</div> </div>													
<div> <div>LG</div> <div>1</div> <div></div> </div>													
<div> <div>63389</div> <div>1</div> <div></div> </div>													

865292

(x1)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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January 11, 2011 9:10:24 AM

Work Order ID: 65287

Parent Item: D206-642-541

Parent Item Name: Replacement Skidtube

Start Date: 1/11/11

Required Date: 1/28/11

Start Qty: 1.00

Required Qty: 1.00

D2649

Manufactured No

190

Each

53.0000

12

12



Cross Bolt Spacer

Location

Loc Qty

Loc Code

LG

53

58545

2

60652

4

61496

2

62889

13

63359

32



865317 *12

BE 11/01/20

D3275-1

Manufactured No

190

Each

28.0000

12

12



Crossbolt Spacer

Location

Loc Qty

Loc Code

LG

28

53453

8

62399

1

63546

19



865295 *12

BE 11/01/20

CR3212-4-03

Purchased No

250

Each

1,869.000

2

2



Cherry Rivet

Location

Loc Qty

Loc Code

ST311

1869

110153

35

111359

5

112314

2

114436

448

114450

33

114859

1346



11102101

X2

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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Picklist Print

January 11, 2011 9:10:25 AM

Work Order ID: 65287

Parent Item: D206-642-541


Parent Item Name: Replacement Skidtube

Start Date: 1/11/11

Required Date: 1/28/11


Start Qty: 1.00

Required Qty: 1.00

D3415-041 Manufactured No 250 Each 33.0000 1 1

 Nut Plate


Location Loc Qty Loc Code

ST056 33
33842 33

CCR264SS3-3 Purchased No 250 Each 310.0000 2 2

 Cherry Rivet

Location Loc Qty Loc Code

ST311 310
 112314 4
 113539 44
113973 262

ALS4-1032-130 Purchased No 250 Each 1,129.000 78 78

 Insert

Location Loc Qty Loc Code

PKG11 550
 114407 3
 114723 547
 ST281 444
116049 444
 ST282 96
 110511 10
 115911 86
 ST381 39
 114654 39

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Picklist Print

January 11, 2011 9:10:26 AM

Page 4

Work Order ID: 65287

Parent Item: D206-642-541



Parent Item Name: Replacement Skidtube

Start Date: 1/11/11



Required Date: 1/28/11

Start Qty: 1.00



Required Qty: 1.00

D3536-15 Manufactured No 270 Each 18.0000 1 1
  yl 1/02/01
 Gasket



Location	Loc Qty	Loc Code
FP	1	
56055	1	
FP011	16	
<u>63568</u>	16	<u>xl</u>
FP11	1	
59238	1	

D3536-23 Manufactured No 270 Each 11.0000 1 1
  yl 1/02/01
 Gasket

Location	Loc Qty	Loc Code
FP011	11	
<u>63570</u>	11	<u>xl</u>

D3536-35 Manufactured No 270 Each 7.0000 1 1
  yl 1/02/01
 Gasket

Location	Loc Qty	Loc Code
FP012	7	<u>1365573</u>
58683	1	<u>xl</u>
<u>63579</u>	6	

D3536-39 Manufactured No 270 Each 15.0000 1 1
  yl 1/02/01
 Gasket

Location	Loc Qty	Loc Code
FP012	14	
<u>63578</u>	14	<u>xl</u>
FP12	1	
58215	1	

January 11, 2011 9:10:26 AM

Shop Packet Print

Page 4

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

January 11, 2011 9:10:27 AM

Page 6

Work Order ID: 65287

Parent Item: D206-642-541

Parent Item Name: Replacement Skidtube

Start Date: 1/11/11

Required Date: 1/28/11

Start Qty: 1.00

Required Qty: 1.00

D3537-3 Manufactured No

270 Each

10.0000

1

1



Wearpad



11/02/01

Location

Loc Qty

Loc Code

FP17

10

62705

10

X1

D3537-1 Manufactured No

270 Each

39.0000

9

9



Wearpad



11/02/01

Location

Loc Qty

Loc Code

FP017

39

63545

2

63997

37

BC-424

Y9

AN960C10L NAS1149C0332 Purchased No

270 Each

25.0000

80

80



washer



11/02/01

Location

Loc Qty

Loc Code

ST245

25

107534

25

11116025

AN960C416 NAS1149C0463 Purchased No

270 Each

29.0000

1

1



washer



11/02/01

Location

Loc Qty

Loc Code

ST346

29

100993

29

1115358

Y1

January 11, 2011 9:10:27 AM

Shop Packet Print

Page 6

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

January 11, 2011 9:10:27 AM

Work Order ID: 65287

Parent Item: D206-642-541

Parent Item Name: Replacement Skidtube

Start Date: 1/11/11

Required Date: 1/28/11

Start Qty: 1.00

Required Qty: 1.00

D3672-1

Manufactured No

270

Each

1,309.000

2

2



Phenolic Washer



sl 11/02/01

Location

Loc Qty

Loc Code

ST077

1309

42329

10

52505

299

64177

1000

x2

AN3C4A

Purchased

No

270

Each

1,233.000

80

80



BOLT

*



sl 11/02/01

Location

Loc Qty

Loc Code

ST350

1233

115300

25

115936

208

116075

1000

x80

AN4C5A

Purchased

No

270

Each

449.0000

1

1



BOLT



sl 11/02/01

Location

Loc Qty

Loc Code

ST346

449

110552

1

112243

448

x1

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

January 11, 2011 9:10:28 AM

Work Order ID: 65287



Parent Item: D206-642-541



Parent Item Name: Replacement Skidtube

Start Date: 1/11/11

Required Date: 1/28/11

Start Qty: 1.00

Required Qty: 1.00

D2646

Manufactured No

270

Each

84.0000

1

1



Aft Cap



xl 1102102

Location

Loc Qty

Loc Code

FP-4

13

57332

13

FP6

17

52663

3

62678

12

63633

2

xl

Return 2010

54

62678

54

D3413-1

Manufactured No

270

Each

25.0000

1

1



Ring



xl 1102101

Location

Loc Qty

Loc Code

ST420

17

62961

17

xl

ST473

8

51586

1

53446

7

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART

RELEASED

07.02.12

DEO ATTACHED

DESIGN CP	DRAWN BY PH	DART AEROSPACE USA, INC. PORT HADLOCK, WA	
CHECKED H	APPROVED H	DRAWING NO. D3274	REV. D SHEET 1 OF 4
DATE 06.12.19		TITLE SKIDTUBE ASSEMBLY SCALE NTS	
A	04.03.15	NEW ISSUE	
B	04.08.09	MOVE SADDLE HOLE: 42.14 WAS 42.76	
C	05.03.16	ADD -043; NEW INSERTS	
D	06.12.19	NEW INSERTS, SS WEARSHOE + GASKET	

Qty -041	Qty -043	Part Number	Description
X		D3274-041	SKIDTUBE ASSEMBLY
	X	D3274-043	SKIDTUBE ASSEMBLY
1	1	D2600-1-240	EXTRUSION
1	1	D2646	AFT CAP
12	12	D2649	CROSS BOLT SPACER
12	37	D3275-1	CROSS BOLT SPACER
1	1	D3282-041	FLOAT WEB
1	1	D3285-1	CAP
1	1	D3413-1	RING
1	1	D3415-041	NUT PLATE
1	1	D3535-15	WEARSHOE
1	1	D3535-23	WEARSHOE
1	1	D3535-35	WEARSHOE
1	1	D3535-39	WEARSHOE
1	1	D3536-15	GASKET
1	1	D3536-23	GASKET
1	1	D3536-35	GASKET
1	1	D3536-39	GASKET
9	9	D3537-1	WEARPAD
1	1	D3537-3	WEARPAD
78	78	ALS7-1032-130	INSERT (or AKS4-1032-130, ALS4-1032-130, AELS-1032-130)
80	80	AN3C4A	BOLT
1	1	AN4C5A	BOLT
1	1	AN960C416	WASHER
80	80	AN960C10L	WASHER
2	2	CCR264SS3-3	RIVET
2	2	CR3212-4-03	RIVET
2	2	NAS1515H3L	WASHER

GENERAL NOTES:

1. TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
2. DAMAGE TOLERANCE ON FWD BEND:
THERE SHOULD BE NO VISIBLE WRINKLES IN THE BEND FROM THE GROUND TO A HEIGHT OF 7 INCHES ABOVE THE GROUND. IT IS ACCEPTABLE TO POLISH OUT GOUGES UP TO 0.020 DEEP IN THE BENT PORTION OF THE TUBE. A MAXIMUM REDUCTION IN DIAMETER OF 0.150" IS ACCEPTABLE IN THE BENT PORTION OF THE TUBE.
3. ALL HOLES DRILLED ON CENTERLINES.
4. BOND D3282-041 FLOAT WEB INTO D3274-1/-3 OUTER TUBE WITH NON-STRUCTURAL SIKAFLEX-241/291 ADHESIVE PER DART QSI 015. ENSURE HOLES LINE-UP.
5. WELDING TO BE DONE PER DART QSI 004.
6. FINISH: - ACID ETCH, ALODINE ASSEMBLY PER DART QSI 005 4.1
- POWDER COAT WHITE (REF. 4.3.5.1) PER DART QSI 005 4.3
7. DRILL Ø0.297 HOLES FOR ALS7-1032-130 INSERTS USING DT3274-1T2 BEFORE FINISH. INSTALL ALS7-1032-130 INSERTS AFTER FINISH. SEAL WEARSHOE BOLTS WITH SIKAFLEX -241/-291.
8. SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES "LPS-3" AFTER FINISH AND INSTALLATION OF INSERTS. COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY, CLEAN EXCESS OFF POWDER COATING WITH MEK DEGREASER.

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DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

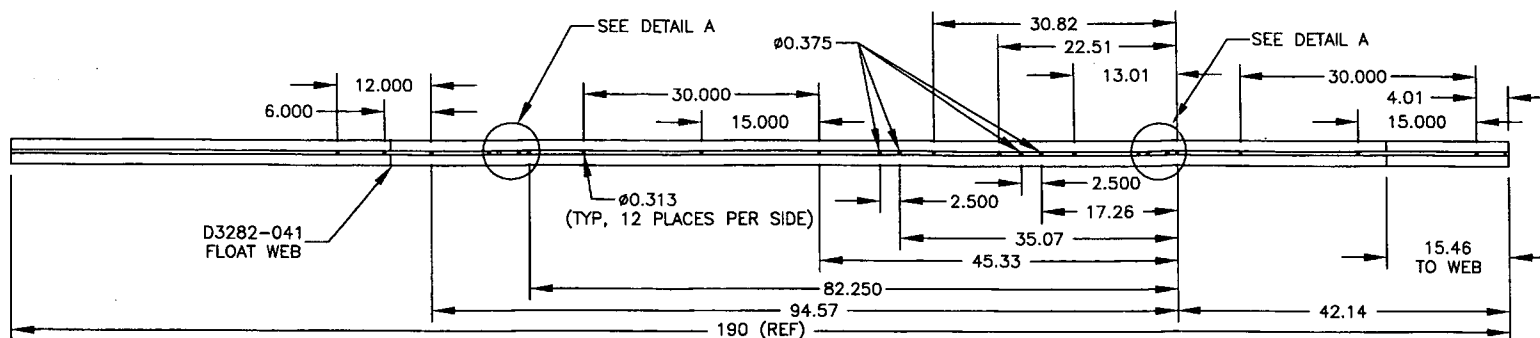
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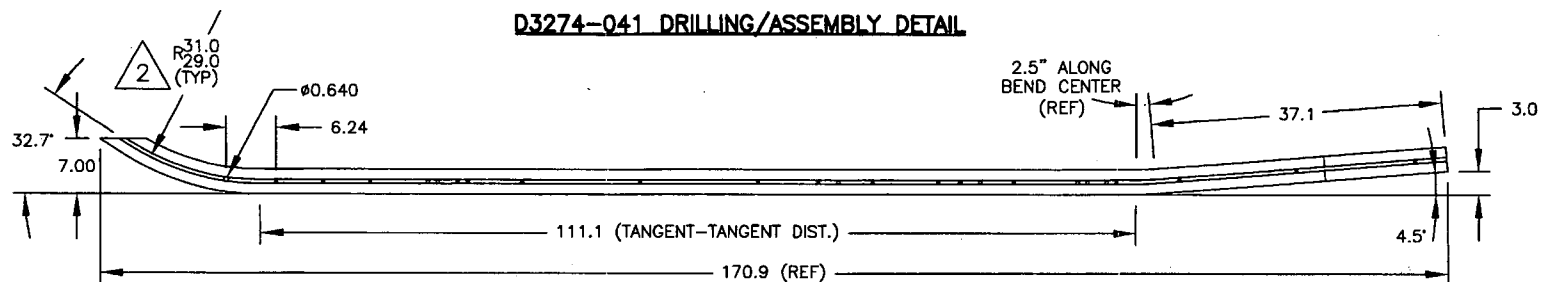
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

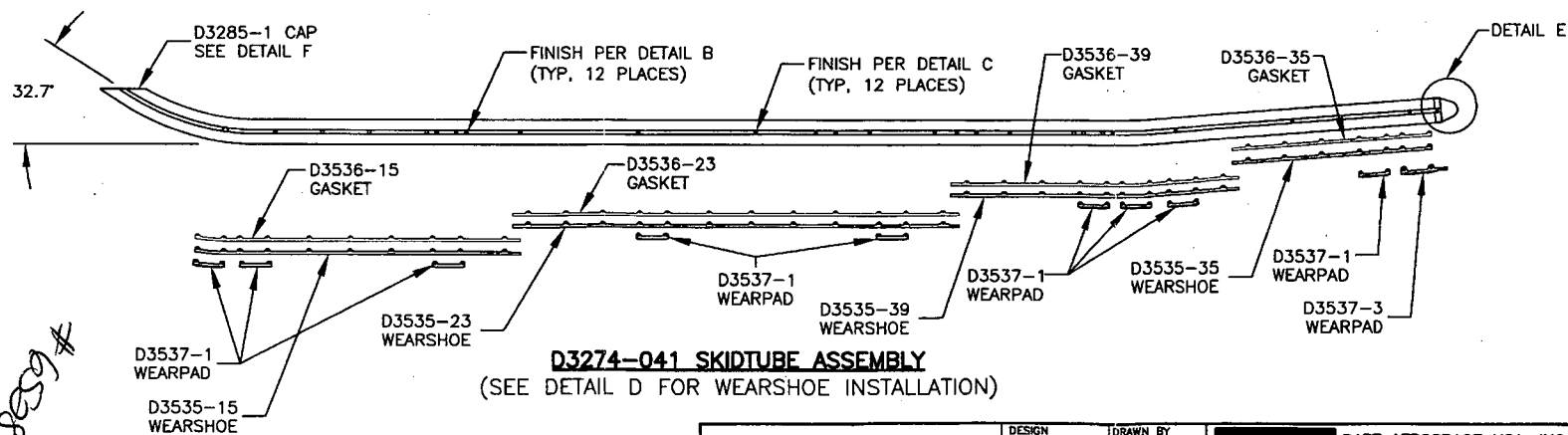
DEO ATTACHED



D3274-041 DRILLING/ASSEMBLY DETAIL



D3274-041 BEND/DRILLING DETAIL



D3274-041 SKIDTUBE ASSEMBLY

(SEE DETAIL D FOR WEARSHOE INSTALLATION)

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07.02.12

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		DATE	06.12.19			TITLE	SCALE	
		SKIDTUBE ASSEMBLY						
		1:15						

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

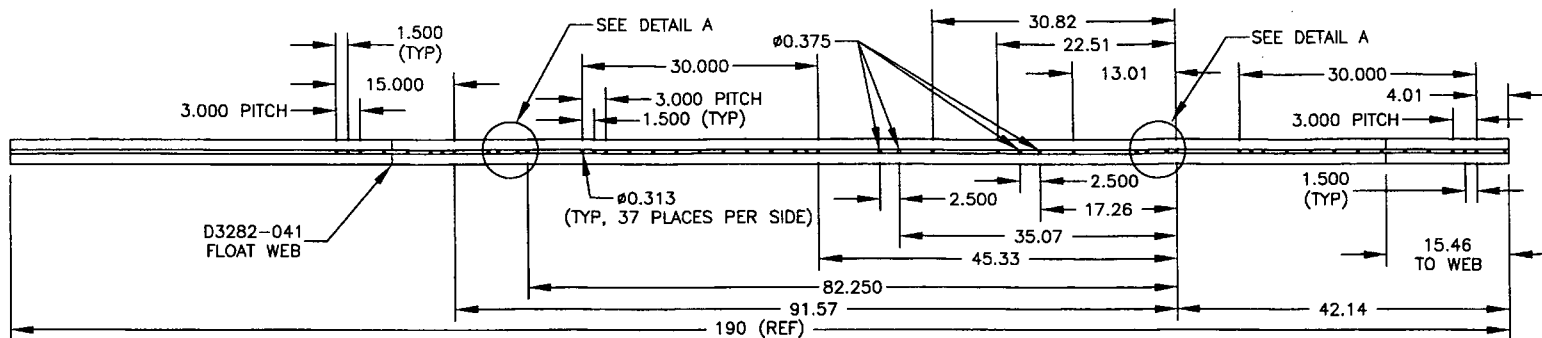
Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

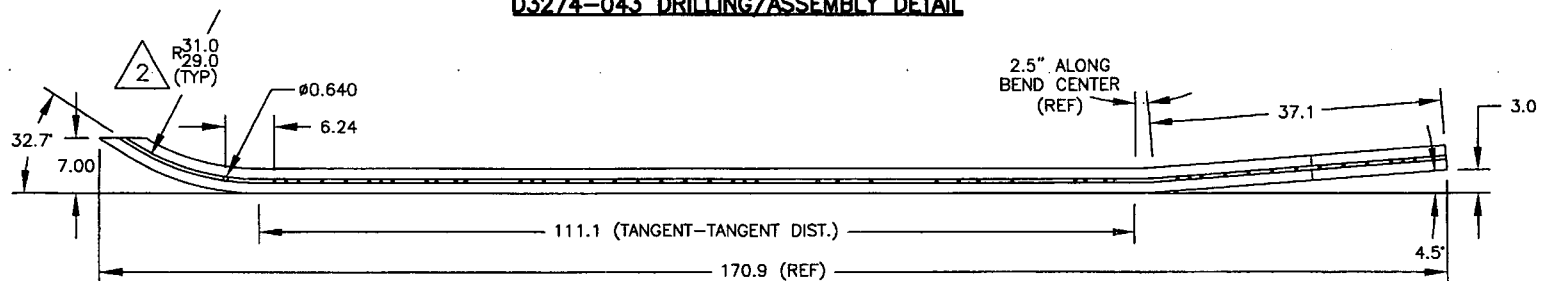
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

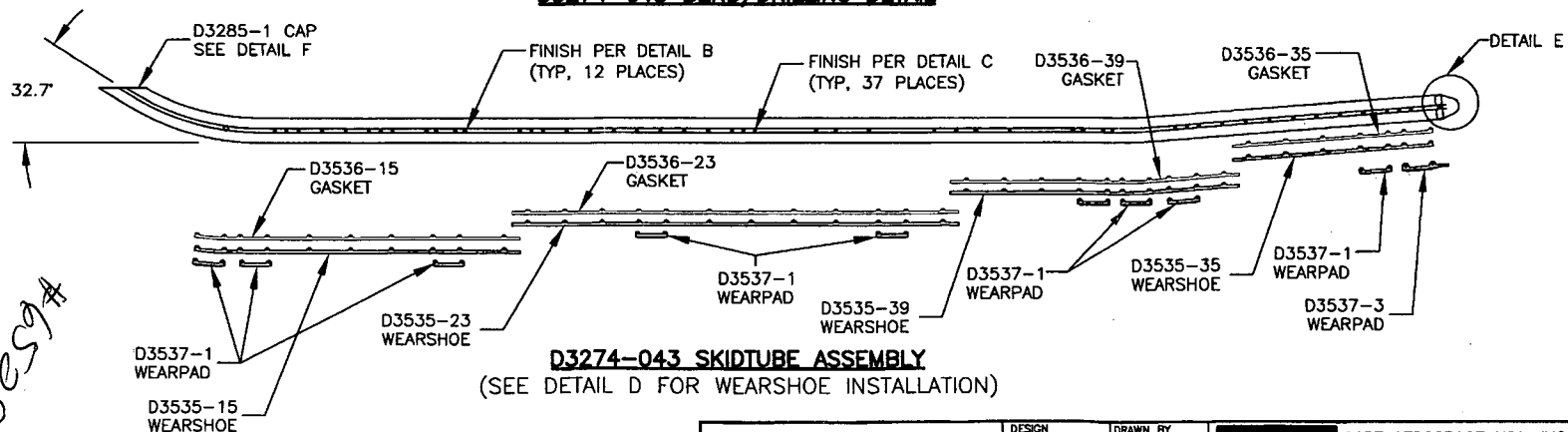
DEO ATTACHED



D3274-043 DRILLING/ASSEMBLY DETAIL



D3274-043 BEND/DRILLING DETAIL



RELEASED

07.02.12


V8C59A

D3274-043 SKIDTUBE ASSEMBLY
(SEE DETAIL D FOR WEARSHOE INSTALLATION)

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DESIGN	CP	DRAWN BY	PH
CHECKED	<i>[Signature]</i>	APPROVED	<i>[Signature]</i>
DATE			
06.12.19			

 DART AEROSPACE USA, INC. PORT HADLOCK, WA	
DRAWING NO. D3274	REV. 0 SHEET 3 OF 4
TITLE SKIDTUBE ASSEMBLY	SCALE 1:1

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

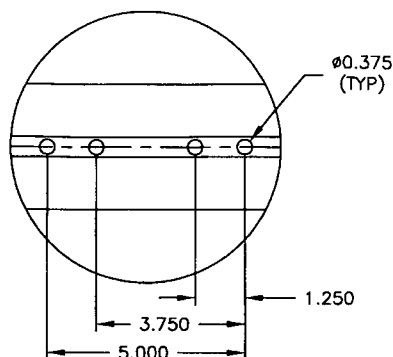
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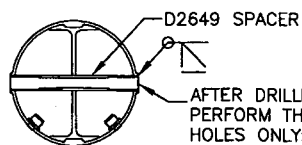
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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DETAIL A: DRILL DETAIL

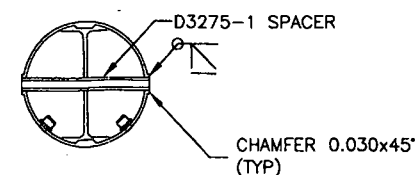


DETAIL B FOR $\phi 0.375$ HOLES ONLY

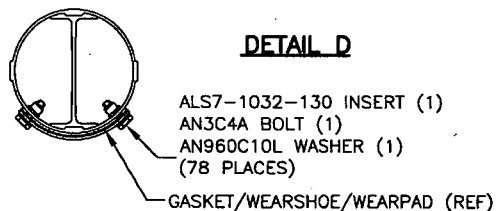


- AFTER DRILLING AND BENDING ASSEMBLY
PERFORM THE FOLLOWING FOR $\phi 0.375$
HOLES ONLY:
1. CHAMFER HOLE $0.030 \times 45^\circ$
 2. INSERT D2649 SPACER
 3. WELD INTO PLACE AND GRIND FLUSH
 4. C'BORE TO $\phi 0.313 \times 0.75$ DEEP

DETAIL C FOR $\phi 0.313$ HOLES ONLY



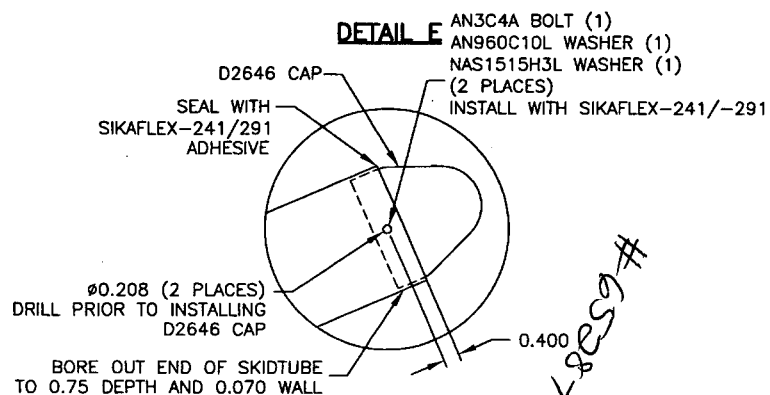
DETAIL D



- ALS7-1032-130 INSERT (1)
AN3C4A BOLT (1)
AN960C10L WASHER (1)
(78 PLACES)

GASKET/WEARSHOE/WEARPAD (REF)

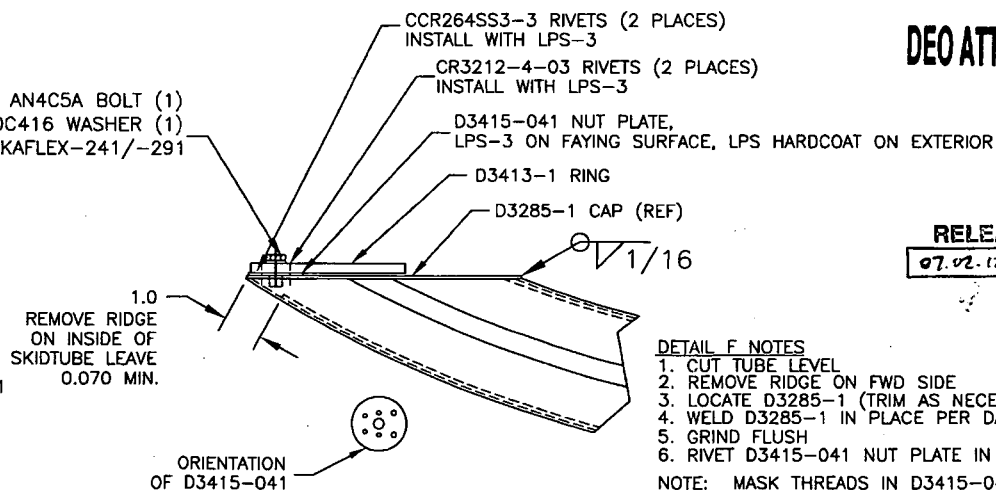
DETAIL E



- AN3C4A BOLT (1)
AN960C10L WASHER (1)
NAS1515H3L WASHER (1)
(2 PLACES)
INSTALL WITH SIKAFLEX-241/-291

SEAL WITH
SIKAFLEX-241/291
ADHESIVE

DETAIL F: END FINISHING DETAIL



DEO ATTACHED

RELEASED
07.02.12

DETAIL F NOTES

1. CUT TUBE LEVEL
 2. REMOVE RIDGE ON FWD SIDE
 3. LOCATE D3285-1 (TRIM AS NECESSARY)
 4. WELD D3285-1 IN PLACE PER DART QSI 004
 5. GRIND FLUSH
 6. RIVET D3415-041 NUT PLATE IN PLACE
- NOTE: MASK THREADS IN D3415-041
PRIOR TO FINISH

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CHECKED #	APPROVED #	DATE 06.12.19	DRAWING NO. D3274	
TITLE SKIDTUBE ASSEMBLY				REV. D SHEET 4 OF 4 SCALE 1:3

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

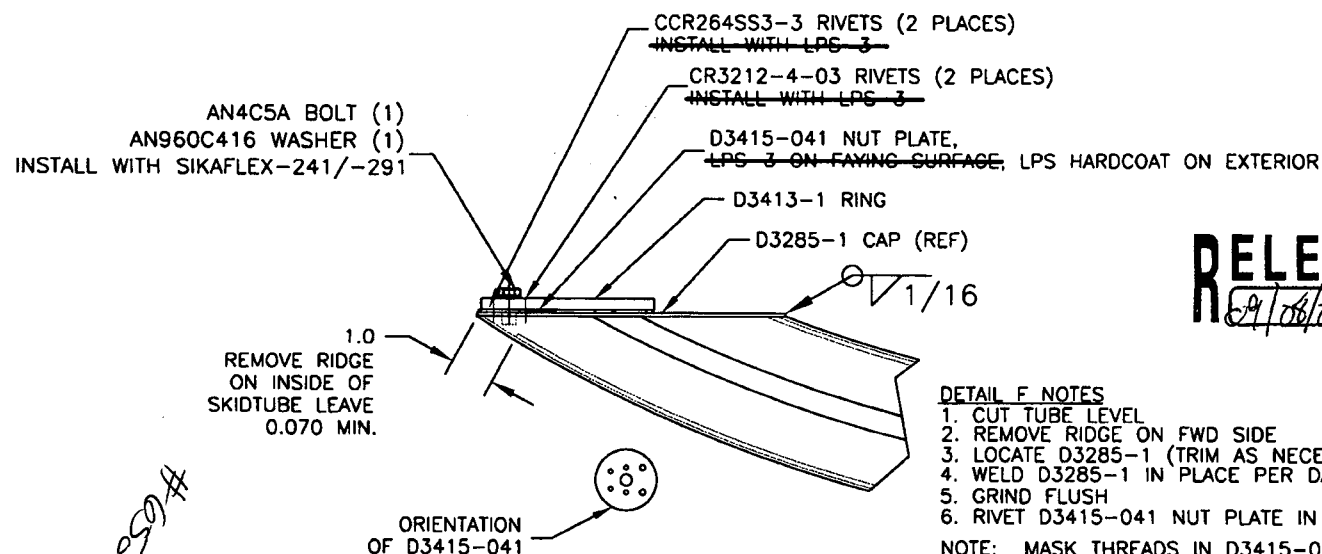
DRAWING NO. D3274	TITLE SKIDTUBE ASSEMBLY	REV. D	DART AEROSPACE USA, INC ENGINEERING ORDER	D.E.O. NO. D3274-D-1	SHEET NO. SHEET 1 OF 1	SCALE NTS
DRAWN <i>UP</i>	CHECKED <i>L</i>	MFG. APPR. <i>M</i>	APPROVED <i>MAP</i>	DE APPR. <i>#</i>		
DATE 09.06.17	DATE 09.06.23	DATE 09/06/23	DATE 09/06/23	DATE 09.06.23		

LPS-3 IS NO LONGER USED DURING ASSEMBLY OF SKIDTUBE.

AMEND NOTE 8: "~~SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES 'LPS 3' AFTER FINISH AND INSTALLATION OF INSERTS.~~
COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES 'LPS PROCYON' AFTER FINAL ASSEMBLY, CLEAN EXCESS OFF
POWDER COATING WITH MEK DEGREASER."

AMEND DETAIL F AS SHOWN:

DETAIL F: END FINISHING DETAIL



RELEASED
09/06/23

DETAIL F NOTES

1. CUT TUBE LEVEL
2. REMOVE RIDGE ON FWD SIDE
3. LOCATE D3285-1 (TRIM AS NECESSARY)
4. WELD D3285-1 IN PLACE PER DART QSI 004
5. GRIND FLUSH
6. RIVET D3415-041 NUT PLATE IN PLACE

NOTE: MASK THREADS IN D3415-041
PRIOR TO FINISH

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

• **NOTE:** Date & initial all entries

NO. 242

AWS D17.1.2001
QUALIFICATION TEST RECORD

Name: Barclay Elliott
Job number: 65212
Part number: 206-642-341
Description: 206 Skid tube
Welding Process: Tig ☒ Mig ☐
Base material: Aluminum
Current: AC ☒ DC ☐

TEST REQUIREMENTS AND RESULTS

Visual: pass ☒ fail ☐
Penetration: pass ☒ fail ☐

UNACCEPTABLE

Cracks: pass ☒ fail ☐
Undercut: pass ☒ fail ☐
Pin holes: pass ☒ fail ☐
Overlap (cold lap): pass ☒ fail ☐
Porosity (surface): pass ☒ fail ☐
Coloration: pass ☒ fail ☐

Qualifier Pat Evans Date of Test Coupon 11-01-13
Welder Barclay Elliott Date of Test Coupon 11-01-13

The above named individual is qualified in accordance with AWS D17.1.2001 to weld